



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

pu

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,947	04/06/2001	Gavin D. Hartigan	M00A214	6677

20411 7590 09/02/2003

THE BOC GROUP INC
100 MOUNTAIN AVENUE
MURRAY HILL
NEW PROVIDENCE, NJ 07974-2064

EXAMINER

POLITZER, JAY L

ART UNIT PAPER NUMBER

2856

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,947

Applicant(s)

HARTIGAN ET AL. *CM*

Examiner

Jay L Politzer

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Serial Number: 09/82 47

Art Unit: 2856

Title: METHOD AND SYSTEM FOR LIQUEFACTION MONITORING

Filed: 4/6/01

Inventor(s): Hartigan et al

DETAILED ACTION

REJECTIONS UNDER 35 U.S.C. § 112:

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 15 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example:

Regarding Claim 15; if the sensor is enclosed with the engine how does it connect to the pipe system?

REJECTIONS OVER PRIOR ART UNDER 35 U.S.C. § 102:

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

"A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States."

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and

was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10, 12-16, 22-23 and 25-27 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Inoue et al, JP2000039220, considered to be equivalent to US 6499308 (which will be referred to below), hereinafter Inoue.

Regarding Claims 1-5, 22 and 27; see Col 28, Li 21-56, wherein there are temperature and pressure sensors and reference data sets of saturation vapor temperatures vs. pressure, and the reporting means is inherent in the computer at Col 15, Li 45-49.

Regarding Claim 6-8 and 23 and 25-26; there are three data sets. The first is the theoretical saturation vapor temperature, the average of the saturation vapor temperature and the saturation liquid temperature at high pressure, 21, and the average of the saturation vapor temperature and the saturation liquid temperature at low pressure, 22. Also see Col 9, Li 20-30.

Regarding Claims 9-10 and 14; see Col 28, Li 21-56, wherein there are temperature and pressure sensors and reference data sets of saturation vapor temperatures vs. pressure, and the reporting means is inherent in the computer at Col 15, Li 45-49. The engine comprises three data sets and calculations done on them. The first is the saturation vapor temperature, the second is the average of the saturation vapor temperature and

Serial Number: 09/82 947
Art Unit: 2856

the saturation liquid temperature at high pressure, 21, and the third is the average of the saturation vapor temperature and the saturation liquid temperature at low pressure, 22.

Regarding Claim 12; see Fig 1.

Regarding Claim 13 and 15; see Col 15, Li 45-49

Regarding Claims 16; see Col 28, Li 21-56, wherein there are temperature and pressure sensors and reference data sets of saturation vapor temperatures vs. pressure, and the reporting means is inherent in the computer at Col 15, Li 45-49. The engine comprises three data sets and calculations done on them. The first is the saturation vapor temperature, the second is the average of the saturation vapor temperature and the saturation liquid temperature at high pressure, 21, and the third is the average of the saturation vapor temperature and the saturation liquid temperature at low pressure, 22, wherein the computer can inherently indicate liquefaction.

REJECTIONS OVER PRIOR ART UNDER 35 U.S.C. § 103:

5. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

Serial Number: 09/827,947

Art Unit: 2856

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

6. Claim 11 is rejected under 35 U.S.C. § 103 as being unpatentable over Inoue as applied to claim 10, above, in view of Applicant's recitation.

Regarding Claim 11; Inoue fails to teach temperature or pressure compensation circuits. Applicant recites that such circuits are "routine in the art" at P 11, last ¶ of the document dated 7/31/03. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ such circuitry to correct for "ambient conditions (that) can affect the accuracy of such sensors".

7. Claims 17-21 and 24 are rejected under 35 U.S.C. § 103 as being unpatentable over Inoue.

Regarding Claims 17; a housing is taught at Col 15, Li 45-49, but its' mounting is not taught. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the engine wherever

Serial Number: 09/82 47
Art Unit: 2856

convenient with due consideration for environmental concerns.

Regarding Claims 18; see Col 28, Li 21-56, wherein there are temperature and pressure sensors and reference data sets of saturation vapor temperatures vs. pressure, and the reporting means is inherent in the computer at Col 15, Li 45-49. The engine comprises three data sets and calculations done on them. The first is the saturation vapor temperature, the second is the average of the saturation vapor temperature and the saturation liquid temperature at high pressure, 21, and the third is the average of the saturation vapor temperature and the saturation liquid temperature at low pressure, 22, wherein the computer can inherently indicate liquefaction. A housing is taught at Col 15, Li 45-49, but its' mounting is not taught. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the engine wherever convenient with due consideration for environmental concerns.

Regarding Claim 19; see Fig 5 wherein all parameters are affected by a change in gas.

Serial Number: 09/82-947
Art Unit: 2856

Regarding Claim 20; Inoue is not selectively movable along a gas piping system. However, providing portability to a prior art device is a design consideration within the skill of the art. In re Lindberg, 194 F.2d 732, 93 USPQ 23 (CCPA 1952).

Regarding Claim 21; Inoue teaches only one unit. However, duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Regarding Claim 24; Inoue fails to teach the implied networking. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the internet or other networking means to monitor and control a plurality of refrigerators.

DESCRIPTION OF UNAPPLIED ART:

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because it teaches other aspects of the disclosure.

REMARKS:

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

INQUIRIES:

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr.

Serial Number: 09/82-947


Art Unit: 2856

Jay L. Politzer whose telephone number is (703) 305-4930 and whose facsimile number is (703) 308-7382

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Hezron E. Williams, can be reached at (703) 305-4705.
12. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.

jlp 8/15/03

929


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800